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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,301	06/19/2006	Ikuo Tajima	IIZU:024	8177

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EXAMINER	
IZAGUIRRE, ISMAEL	
ART UNIT	**PAPER NUMBER**
3765	

MAIL DATE	DELIVERY MODE
12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/579,301	TAJIMA ET AL.	
	Examiner	Art Unit	
	Ismael Izaguirre	3765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *4-6 and 13* is/are allowed.

6)☒ Claim(s) *1-3,8,9 and 15* is/are rejected.

7)☒ Claim(s) *10,11 and 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/16/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because it does not properly state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56.

SPECIFICATION

Abstract

The abstract of the disclosure is objected to because of its length. An Abstract should be limited to no more than 150. Correction is required. See MPEP § 608.01(b).

CLAIMS

Summary

Claims 1, 4, 7 and 15 are the independent claims under consideration in this Office Action.

Claims 2, 3, 5, 6 and 8-14 are the dependent claims under consideration in this Office Action.

Claim Rejections - 35 U.S.C. § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 15 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claim 15, line 23, there is no proper antecedent basis for the words "said second cam mechanism".

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 15 is rejected under 35 U.S.C. § 102(b) as being anticipated by Tajima et al. (JP200-157774).

Tajima et al. teach a bobbin changer apparatus for use in replacing a lower thread bobbin of a rotary hook mounted to a sewing machine. Tajima et al. teach the bobbin changer as being attachable onto the underside of a work table for the sewing machine. The bobbin changer includes a plate 22 with two slots 24 and 25 for guiding a chuck from a bobbin stock section distally located from the rotary hook to a bobbin

changing section at the rotary hook 14 and a driving mechanism for moving the chuck from one end to the other. The chuck includes a body portion which includes cam followers which ride within the slots of the plate 22. The chuck first grasps the empty bobbin and moves it to a reserve station 70 where it is placed there. The chuck, which is connected to a transfer mechanism, is then actuated to move reciprocally to grasp a replacement bobbin at the station 70 and then it moves reciprocally away from the station and is reoriented by the curved cam surface of one of the slots 25. The chuck then positions the bobbin case in a neutral position while the chuck moves reciprocally from the station 70 to the rotary hook station (at 14). When the chuck nears the rotary hook station, the orientation is again changed by following the second curved surface of said slot and the chuck is now facing the rotary hook. The chuck is then moved reciprocally toward the rotary hook for replacing the bobbin. The sewing machine is then ready for use.

Claims 7 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kinoshita et al. '417 (6,170,417).

Kinoshita et al. '417 teach a bobbin changer apparatus for use in replacing a lower thread bobbin of a rotary hook mounted to a sewing machine. Kinoshita et al. '417 teach the bobbin changer as being attachable onto the underside of a work table Ta for the sewing machine. The bobbin changer includes a rail system with a linear groove 24 and another groove which has a curved section 23 and a straight section 23c for guiding a chuck from a bobbin stock section (at 3) distally located from the rotary hook to a bobbin changing section at the rotary hook K and a driving mechanism for

moving the chuck from one end to the other. The chuck includes a body portion which includes cam followers which ride within the slots 23 and 24. The chuck first grasps the empty bobbin and moves it to a reserve station 3 where it is placed there. The chuck, which is connected to a transfer mechanism, is then actuated to move reciprocally to grasp a replacement bobbin at the station 3 and then it moves reciprocally away from the station and is reoriented by the curved cam surface of one of the slots 23. The chuck then positions the bobbin case in a neutral position while the chuck moves reciprocally from the reserve station to the rotary hook station K. When the chuck nears the rotary hook station, the orientation is again changed by following the second curved surface of said slot and the chuck is now facing the rotary hook. The chuck is then moved reciprocally toward the rotary hook for replacing the bobbin. The chuck includes a bobbin grasping arm 14 (figure 2) and a drive means 16 for driving the arm and an arm engaging protrusion (between the ends of the leader lines of character numbers 11 and 13). The chuck grasps the bobbin and it is replaced, and as such the sewing machine is then ready for use.

Claims 7 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kinoshita et al. (5,775,243).

Kinoshita et al. '243 teach a bobbin changer apparatus for use in replacing a lower thread bobbin of a rotary hook mounted to a sewing machine. Kinoshita et al. '243 teach the bobbin changer as being attachable onto the underside of a work table St for the sewing machine. The bobbin changer includes a grooved plate 21 including a groove system which has two straight portions and two curved portions. A chuck 35 is

movable along the groove system for transferring a bobbin case from a bobbin stock section 3 distally located from the rotary hook to a bobbin changing section at the rotary hook area 6 and a driving mechanism 42 for moving the chuck from one end to the other. The chuck includes a body portion 43 and 36 which includes cam followers which ride within the slot. The chuck first grasps the empty bobbin and moves it to a reserve station (at 3) where it is placed there. The chuck, which is connected to a transfer mechanism, is then actuated to move reciprocally to grasp a replacement bobbin at the station 3 and then it moves reciprocally away from the station and is reoriented by the curved cam surface of the slot. The chuck then moves reciprocally from the reserve station to the rotary hook station. When the chuck nears the rotary hook station, the orientation is again changed by following the second curved surface of said slot and the chuck is now facing the rotary hook. The chuck is then moved reciprocally toward the rotary hook for replacing the bobbin. The chuck includes a bobbin grasping arm 37 (figure 5) and a drive means 39 for driving the arm and an arm engaging protrusion 38a. The chuck grasps the bobbin and it is replaced, and as such the sewing machine is then ready for use.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 8 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Tajima et al. '774.

Tajima et al. disclose the invention substantially as claimed. Tajima et al. teach a bobbin changer apparatus for use in replacing a lower thread bobbin of a rotary hook mounted to a sewing machine. Tajima et al. teach the bobbin changer as being attachable onto the underside of a work table for the sewing machine. The bobbin changer includes a plate 22 with two slots 24 and 25 for guiding a chuck from a bobbin stock section distally located from the rotary hook to a bobbin changing section at the rotary hook 14 and a driving mechanism for moving the chuck from one end to the other including a timing belt 37. The chuck includes a body portion which includes cam followers which ride within the slots of the plate 22 including two chuck orientation changing sections. However, Tajima et al. do not suggest the first and second orientation changing sections as being removable from the transfer mechanism which moves the chuck from one end to the other.

It would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention to construct the orientation changing sections as removable from the transfer mechanism. Providing such would allow the user to replace the orientation sections with different ones so as to change the speed or rotation of the chuck or to prolong or shorten the reciprocal section attached to the orientation changing sections.

ALLOWABLE SUBJECT MATTER

Claims 4-6, 12 and 13 are allowable over the prior art of record.

Claims 10 11 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

PERTINENT CITATIONS

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sexton, Shinozuka et al. Mizuno and Schumann et al. illustrate sewing machines including bobbin changers for replacing bobbins.

INQUIRIES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ismael Izaguirre whose telephone number is (571) 272-4987. The examiner can normally be reached on M-F (8:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Welch can be reached on (571) 272-4996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ismael Izaguirre
Primary Examiner
Art Unit 3765

II
12/25/07